VOSKRESENSKAIA, T.I. (Tushino, Mosk. oby. ul. Okruzhnaia 22 kv. 38. SSSR)

Optical study of blood plasma in cancer. Neoplasma, Bratisl. 5 no.1: 44-52 1958.

1. (Iz Tsentral'noi Klinicheskoi Bol'nitsy MPS, Kafedra khirurgii Tsentral'nogo Instituta Usovershenstvovaniia vrachei, Moskva, SSSR)

(NEOPLASMA, blood in
plasma polarography (Rus))
(POLAROGRAPHY,
of plasma in cancer (Rus))

VOSKRESENSKAYA, T.I. (Moskva)

Optic investigations of the blood serum in cancer [with summary in English]. Pat.fiziol. i eksp.terap. 2 no.3:36-40 My-Je '58 (MIRA 11:7)

1. Iz TSentral'noy klinicheskoy bol'nitsy Ministerstva putey soobshcheniya i kafedry khirurgii (zav. - prof. V.I. Kazanskiy) TSentral'nogo instituta usovershenstvovaniya vrachey.

(NEOPLASMS, blood in,
polarimetry (Rus))

VOSKRESENSKAYA, T. I.

VOSKRESENSKAYA, T. I. : "The optical activity of the blood in cancer." Min Health USSR. Central Inst for the Advanced Training of Physicians. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Science.)

Knizhnaya letopis', No. 31, 1956. Moscow.

ALPATOV. V.V.; VOSKRESENSKAYA, T.I.

Decrease of the optical activity of the blood serum in man with aging. Trudy MOIP.Otd.biol.6:145-149'62. (MIRA 16:7)

1. The State Research Institute of Roentgenology and Radiology, Ministry of Health of RSFSR, Radiolog. Department.
(SERUM—OPTICAL PROPERTIES) (AGING)

KRUGLIKOVA-L'VOVA, R.P.; VOSKRESENSKAYA, T.N.

Control of commercial tetracycline preparations. Antibiotiki 5 no.2:115-117 Mr-Ap '60. (MIRA 14:5)

1. Zavod medpreparatov No.1, Moskva.
(TETRACYCLINE)

VOSKRESENSKAYA, T.S.

Agranulocytosis as a complication of antibiotic therapy.
Vrach.delo no.3:293 Mr '59. (MIRA 12:6)

1. Terapevticheskoye otdeleniye (zav. - T.S.Voskresenskaya) Yaroslavskoy dorozhnoy bol'nitsy (nauchnyy rukovoditel' - prof. M.E.Vasilevskiy).
(AGRANULOCYTOSIS) (ANTIBIOTICS)

VOSKRESENSKAYA, V.B.; KOVAL'SKIY, V.V.; NIKITOV, E.N.; PARINOVA, [illegible].P.

Find of "tibaroliving" in the kimberlites of Siberia.
Zap.Vses.min.ob-va 94 no.5:603 '65.
(MIRA 18:11)

MENYAYLOV, A.A.; VOSKRESENSKAYA, V.B.

Pipes with multistage trap sills in the Botuobuya region. Trudy IAFAN SSSR. Ser.geol. no.8:121-132 '62. (MIRA 15:7)
(Yakutia--Sills (Geology)) (Yakutia--Kimberlite)

VOSKRESENSKAYA, YE. V.;

BALAKHOVSKIY, S.D.; VOSKRESENSKAYA, Ye.V.; FEDOROVA, V.N.

Distribution of S^{35} in organs and tissues in a normal organism and one deficient in vitamin A after intra-abdominal introduction of sulfur-labeled methionine. Dokl. AN SSSR 97 no.1:115-118 Jl '54. (MLRA 7:8)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR. Predstavleno akademikom A.I.Oparinym.
(Sulfur--Isotopes) (Deficiency diseases) (Methionine)

GORCHAKOV, Ovidiy Aleksandrovich; VOSKRESENSKAYA, Ye., red.

[Visiting Uncle Sam; a journalist's report] V gostiakh u diadi Sema; reportazh. Moskva, Molodaia gvardiia, 1965. 221 p. (MIRA 18:3)

VOSKRESENSKAYA, Z.

"I.IA. Krivoshchekov, local geographer" by B.N.Vishnevskii. Reviewed by Z.Voskresenskaia. Geog. v shkole 25 no.2:92-93 Mr-Ap '62. (MIRA 15:2)

(Krivoshchekov, Ivan Iakovlevich) (Vishnevskii, B.N.)

VOSKRESENSKAYA, Z.A. (Leningrad)

Experience in teaching arithmetics in the fifth grade. Mat.v shkole no.5:66-69 S-O '56. (MLRA 9:10)
(Arithmetics--Study and teaching)

JELACIC, Olga, doc., dr.; VOSKRESENSKI, Igor, dr.

Thrombo-embolism on the autopsy table. Voj.san.pregl. 18 no.2:177-182 F '61.

1. Vojnomedicinska akademija u Beogradu, Institut za patologiju i sudsku medicinu.

(THROMBOEMBOLISM pathol)

VOSKRESENSKIY,

AIZIKS; BRODSKIY; VIRABOV; VOSKRESENSKIY; GIDZHEU; DONCHAK; ZNAMENSKIY; KOSTINA; KARITSKAYA; KURNOSOV; PONOMAREV; YAROVITSKIY

Aleksei Aleksandrovich Kriukov. Vest. otorinolar. 12 no.2:79-80 Mr-Ap '50 (CLML 19:2)

1. Obituary.

VOSKRESENSKII, --,
PROZOROVSKII, Problemy Endokrinol. 4, No. 4, 91 (1939)

VOSKRESENSKIY, A.

New method of calculating machine time for winding wire on bobbins. Biul. nauch. inform.: trud i zar. plata 3 no. 11:32-36 '60. (MIRA 14:1)

(Winding machines—Production standards)

ARTEM'YEV, Aleksey Vasil'yevich; VOSKRESENSKIY, Aleksandr Alekseyevich; ITTENBERG, I.A., kand. tekhn. nauk, retsenzent; LYALIN, F.I., inzh., red.; MAKRUSHINA, A.N., red. izd-va; BODROVA, V.A., tekhn. red.

[Loading and unloading machines and mechanisms] Pogruzochno-razgruzochnye mashiny i mekhanizmy. Moskva, Izd-vo "Rechnoi transport," 1961. 409 p. (MIRA 14:7)
(Conveying machinery) (Cranes, derricks, etc.)
(Loading and unloading)

KIRILLOV, I.A., prof.; BORODIN, S.V.,; VINOKUR, R.D.; VOSKRESENSKIY, A.A.; GIROVSKIY, V.F.; ZHITOMIRSKIY, E.G.; SAFRAY, G.Ye.; SYCHEV, N.G.; NIKITIN, N.D.; FILATOV, N.L.; FIALKOVA, V., red.; LEBEDEV, A., tekhn.red.

[Finances of branches of the national economy] Finansy otraslei narodnogo khoziaistva. Avtorskii kollektiv pod rukovodstvom I.A.Kirillova. Moskva, Gosfinizdat, 1958. 302 p. (MIRA 12:2)
(Finance)

VOSKRESENSKIY, A.

Electric meter for hand pulley blocks. Zhil.-kom.khoz. 5 no.8: 26-27 '55. (MLRA 9:3)

1. Nachal'nik vodoprovednykh nasosnykh stantsiy tresta "Vodokanal", g. Kalinina.

(Pulleys)

VOSKRESENSKIY, A.

Assembling and operating sinking pumps in Kalinin. Zhil.-kom. khoz. 7 no.3:17-19 '57. (MLRA 10:4)

1. Nachal'nik vodoprovodnykh nasosnykh stantsiy tresta "Vodokanal" goroda Kalinina.
(Kalinin--Water supply) (Pumping machinery)

VOSKRESENSKIY, A.

VOSKRESENSKIY, A.

Remote control and remote signal systems for pumping units.
Zhil.-kom.khoz.7 no.11:10-11 '57. (MIRA 10:12)

1. Nachal'nik vodoprovodnykh nasosnykh stantsiy g.Kalinina.
(Remote control) (Pumping stations)

VOSKRESENSKIY, A. (g.Kalinin)

Water-pressure gauge. Zhil.kom.khoz. 9 no.6:24 '59.
(MIRA 12:10)

(Manometer)

MIKOYAN, A.; IGNATOV, N.; KOROVUSHKIN, A.; GARBUZOV, V.; KABKOV, Ya.; KUDRYAVTSEV, A.; BORYCHEV, I; VOROB'YEV, V.; SVESHNIKOV, M.; USHAKOV, V.; MIROSHNICHENKO, B.; ZENCHENKO, N.; BABUSHKIN, V.; NIKITKIN, N.; PODSHIVALENKO, P.; ZOTOV, M.; VOSKRESENSKIY, A.; KAZANTSEV, A.; KORDYUKOV, A.; NOSKO, P.; PLESHAKOV, S.; VERSOV, A.; ROMASHOV, A.

I.N. Kazakov; obituray. Den. i kred. 19 no.3:95 Mr '61. (MIRA 14:3)
(Kazakov, Ivan Nikolaevich, 1907-1961)

VOSKRESENSKIY, A.; IZOSIMOV, G.; PROKHOROV, A.

Generator of moods. Znan.-sila 37 no.5:34-35 My '62.
(MIRA 15:9)

(Psychology, Physiological) (Rhythm)

VOSKRESENSKIY, A.A.

Making airtight cameras for the operation in the inert gas atmosphere. Zav. lab. 30 no.5:635-636 '64. (MCRA 17:5)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

ACCESSION NR: AP4041764 S/0076/64/0038/006/1703/1705

AUTHOR: Volodina, N. A. ; Shidlovskiy, A. A. ; Voskresenskiy, A. A.

TITLE: Heat of formation of alkali metal chlorates.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 6, 1964, 1703-1705

TOPIC TAGS: cesium chlorate, cesium chloride, thermodynamic function, calorimetry, alkali chlorate, alkali chloride, explosive, chlorate, fuel

ABSTRACT: The purpose of the study was to investigate the change of the difference

$$\Delta H_{298,\,Cl^-} - \Delta H_{298,ClO_3^-}$$

for salts with the same cation and the consideration of salts of different metals. It was also of practical interest to evaluate Q in reactions of the type

$$1/n\ Me(ClO_3)_n = 1/n\ MeCl_n + 1.5\ O_2 + Q$$

since the explosive properties of chlorates and their mixtures with fuels depend

Card 1/2

ACCESSION NR: AP4041764

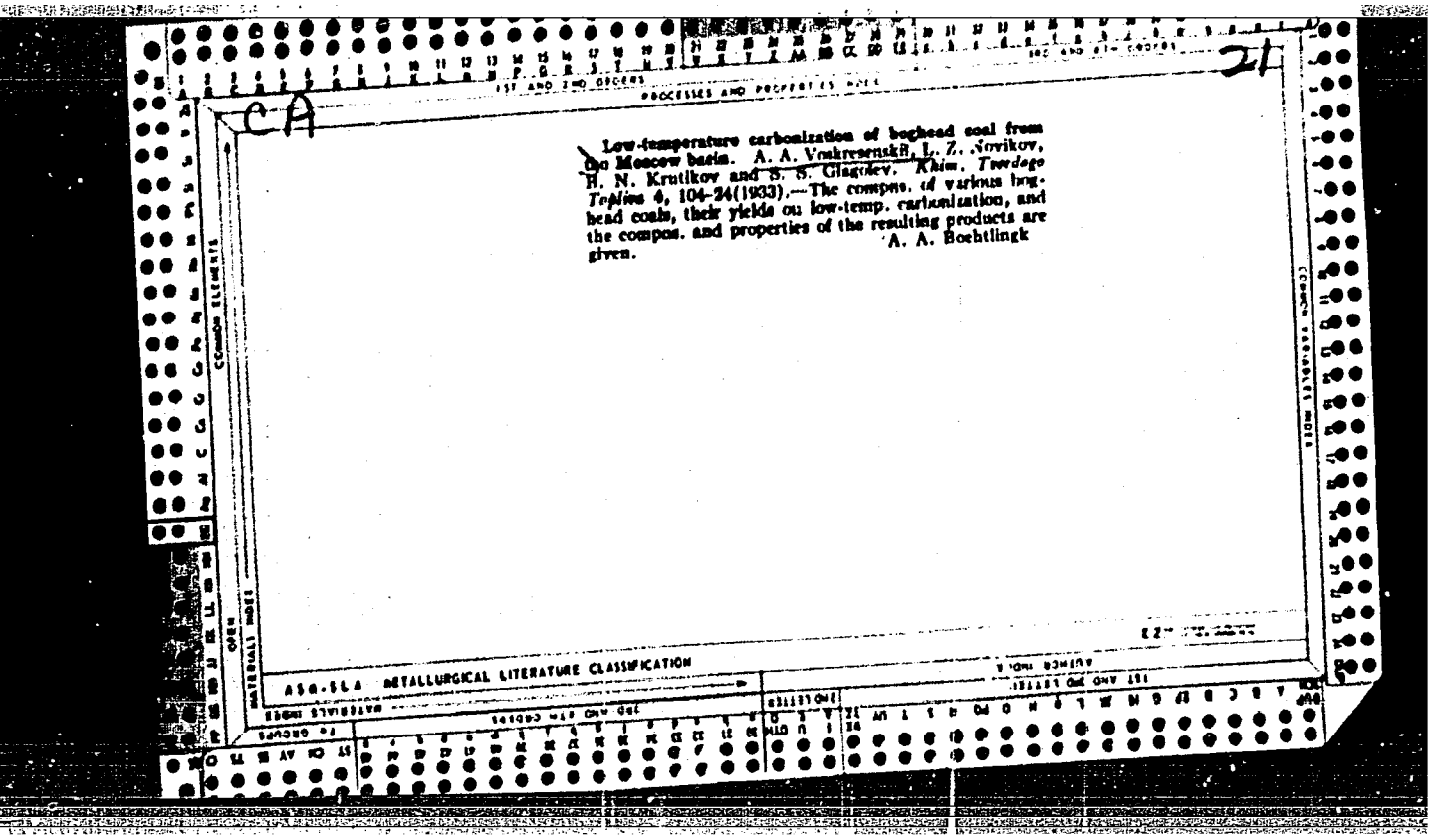
to a great extent on the amount of heat which is liberated in the decomposition of chlorates. Cesium chlorate was the subject of this investigation. The iodometric assay of cesium chlorate was 98.5 %. The heat of the solution of cesium chlorate in water was determined in an isothermal calorimeter. The temperature measurements were accurate to ± 0.002 C. The calorimeter was electrically calibrated and the time was measured with an accuracy of ± 0.5 %. The determined standard heat of the solution of cesium chlorate in water was ΔH_{298} = 11.8 kcal/mole and the calculated heat of formation of crystalline $CsClO_3$ is -94.6 kcal/mole. The tabulation of the heats of formation of alkali metal chlorates indicates that the difference in heats of formation of salts with the same cation are not strictly constant (10.3 ± 1.3 kcal/mole) and it slowly decreases from Na to Cs. Orig. art. has: 3 tables.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Machine Building for Chemical Industry)

SUBMITTED: 25Nov63 ENCL: 00

SUB CODE: IC, TD NO REF SOV: 006 OTHER: 001

Card 2/2



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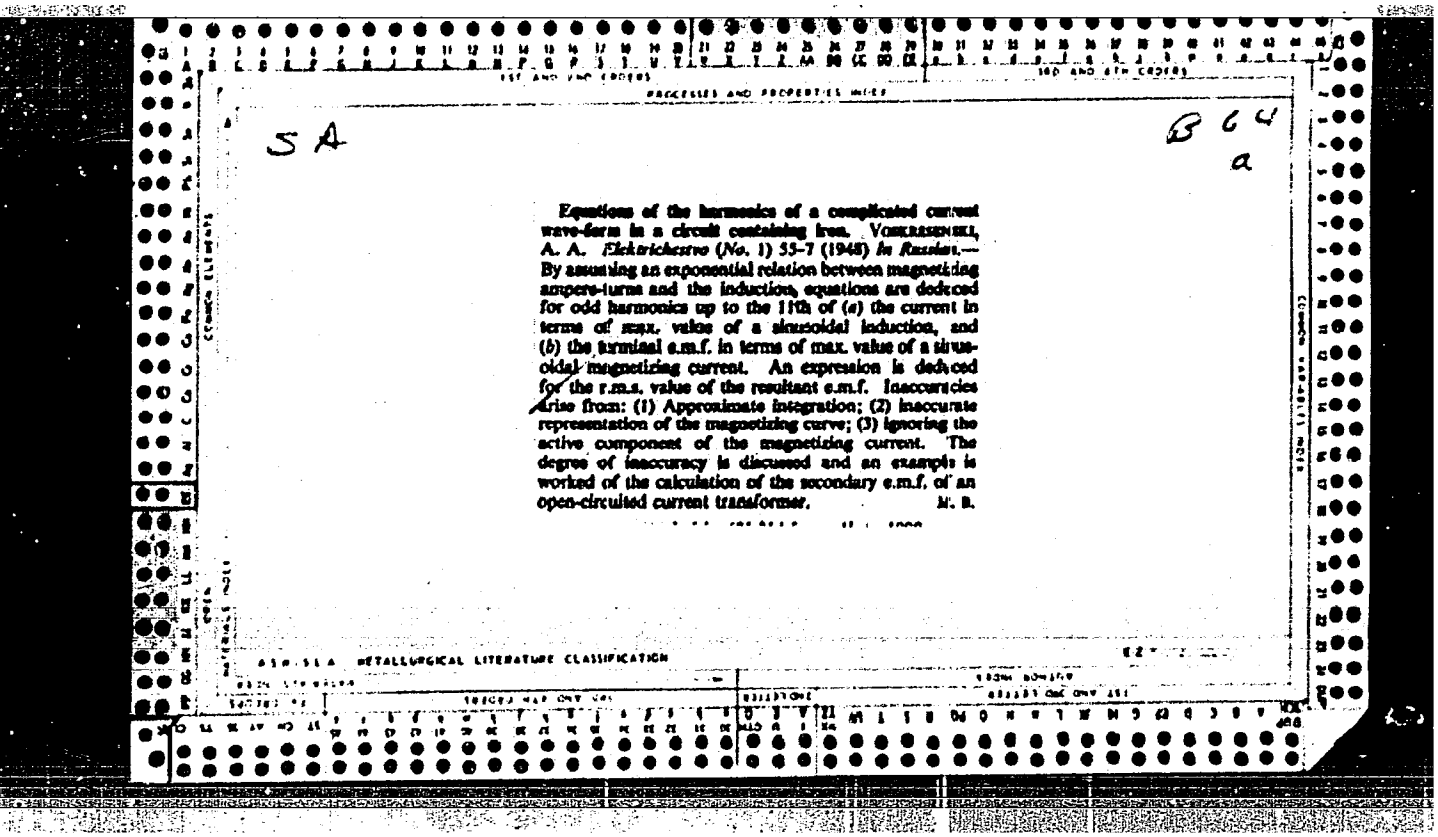
21

Low-temperature carbonization of boghead coal from the Moscow basin. A. A. Voskresenskiĭ, L. Z. Novikov, B. N. Krutikov and S. S. Glagolev. *Khim. Tverdogo Topliva* 4, 104-24(1933).—The compns. of various boghead coals, their yields on low-temp. carbonization, and the compns. and properties of the resulting products are given.
A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



5A

B 64
a

Equations of the harmonics of a complicated current wave-form in a circuit containing iron. VOSKRESENSKII, A. A. *Elektrichestvo* (*No.* 1) 55–7 (1948) *In Russian.*—By assuming an exponential relation between magnetizing ampere-turns and the induction, equations are deduced for odd harmonics up to the 11th of (*a*) the current in terms of max. value of a sinusoidal induction, and (*b*) the terminal e.m.f. in terms of max. value of a sinusoidal magnetizing current. An expression is deduced for the r.m.s. value of the resultant e.m.f. Inaccuracies arise from: (1) Approximate integration; (2) Inaccurate representation of the magnetizing curve; (3) Ignoring the active component of the magnetizing current. The degree of inaccuracy is discussed and an example is worked of the calculation of the secondary e.m.f. of an open-circuited current transformer. M. B.

AUTHOR: Voskresenskiy, A. A. 20-119-4-26/60

TITLE: The Adsorption of Ammonia on Graphitized Carbon Black (Adsorbtsiya ammiaka na grafitirovannoy sazhe)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 4, pp. 724 - 726 (USSR)

ABSTRACT: The author first gives a short report on the present stage of the problem and on the results of some previous works dealing with this subject. According to these results it is impossible simply to apply the conceptions worked out for the adsorption of water to the adsorption of ammonia on carbon adsorbents. The present paper describes the results obtained by measuring the adsorption of ammonia vapors on carbon black which had formerly been heated red hot at a temperature of 1700° in a hydrogen current. The selection of the carbon black and its preliminary treatment were determined by the search for a carbon- adsorbent with a relatively homogeneous surface. The specific surface of the carbon black pre-treated in this manner amounted to $\sim 100 m^2/g$. The temperature of the adsorbent was kept at a constant level by means of a pyrostat with an accuracy of $\pm 0,1^{\circ}$. A diagram shows the isothermal lines of

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the adsorption of ammonia on carbon black determined by the author at a temperature of -36,3°. Within the entire range of the relative pressures employed here adsorption is fully reversible. Up to a certain point A on this curve it is monomolecular, and this point A corresponds approximately to transition to polymolecular adsorption. Comparing the isothermal lines obtained here with those - (well-known from publications) - for the adsorption of water vapors on similar adsorbents leads to the following conclusions: The isothermal lines of adsorption in the monomolecular domain are in both cases concave, but their shape nevertheless shows considerable differences. The isothermal lines of the adsorption of water show a domain with a very steep slope, which does not exist in the isothermal lines of the adsorption of ammonia. In the case of the adsorption of ammonia on carbon black with different acidity no shifting of isothermal lines towards higher relative pressure in connection with a reduction of the quantity of surface oxides can be observed. In the case of the adsorption of ammonia on hydrocarbon adsorbents the amounts of adsorption are quite considerable even at

relatively low pressures. In the interval of relative pressures of from 0,1 to 0,45 the data found here can be expressed by means of an equation of the following type: $a = a_0 ch/(1 - ch)$. Here a denotes adsorption, h - the relative pressure of water vapors, c and a_0 - constants. a_0 here denotes the number of "primary" adsorption centers, which the molecules of the chemically adsorbed oxygen turn out to be. Finally, an expression is derived for the degrees of filling up the surface with complexes from 1,2,3 etc. molecules. The author thanks V. V. Serpinskiy and B. P. Bering for the constant interest they displayed and for their assistance in working out this paper. There are 2 figures and 5 references, 4 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry AS USSR)

The Adsorption of Ammonia on Graphitized Carbon Black 2o-119-4-26/6o

PRESENTED: December 2, 1957, by M. M. Dubinin, Member, Academy of Sciences, USSR

SUBMITTED: November 22, 1957

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5(4) SOV/20-122-3-31/57

AUTHORS: Timofeyev, D. P., Voskresenskiy, A. A.

TITLE: The Investigation of the Mechanism of Internal Diffusion by the Method of X-Ray Diascopy (Issledovaniye mekhanizma vnutrenney diffuzii metodom rentgenovskoy diaskopii)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 3, pp 434-436 (USSR)

ABSTRACT: The matter adsorbed in porous sorbents from a flowing gas moves by diffusion in the volume of the pores and on the surface. Both kinds of transfer proceed simultaneously and into the same direction. This paper deals with the separation of the flows in the gaseous and in the adsorption phase. The idea of the method is discussed in a few lines. Granulated charcoal of vapor-gaseous activation was used as a sample for these investigations. The results of one of the experimental series are represented by a figure. According to these results, the transfer of matter in the gaseous phase is of essential importance and the rôle of the great pores as means of transfer is very essential for the velocity of the internal diffusion. The authors thank Academician M. M. Dubinin for dis-

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SOV/20-122-3-31/57

The Investigation of the Mechanism of Internal Diffusion by the Method of X-Ray Diascopy

cussing the results. There are 4 figures.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR
(Institute of Physical Chemistry, Academy of Sciences, USSR)

PRESENTED: April 26, 1958, by M. M. Dubinin, Academician

SUBMITTED: April 12, 1958

Card 2/2

BAZILEVSKIY, V.M.; VOSKRESENSKIY, A.A.

Laboratory study of the methods of preparing phosphorus copper by treating solid and molten copper with gaseous phosphorus. Trudy Giprotsvetmetobrabotka no.20:287-304 '61. (MIRA 15:2)
(Copper) (Phosphorus)

S/069/61/023/001/001/009
B020/B056

AUTHOR: Voskresenskiy, A. A.

TITLE: Adsorption of ammonia vapors on carbon black

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 1, 1961, 3-7

TEXT: The measurements carried out by the author had the purpose of clearing up the character of non-equilibrium adsorption of ammonia in the presence of surface oxides. Channel black of the type сферон-6 (sferon-6) was used as adsorbent; the constant temperature of the adsorbent was maintained by means of a cryostat (Ref. 6). The temperature fluctuations did not exceed ±0.1°C; the ammonia vapor pressure showed a deviation of ±0.8% from the mean value of 620 mm Hg. The measurements were carried out at -36.3°C by a volumetric method. The evacuation of the weighed portion of the carbon black sferon-6 was carried out at room temperature without heating. On the adsorption branch of the isothermal line, obtained after some days of uninterrupted operation of the cryostat (Fig. 1), the flat sections correspond to the series of measurements carried out at constant temperature of the cryostat (-36.3°C), and the breaks correspond

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to two heating periods of the cryostat to room temperature. The first series, which is denoted on the curve by four points, was carried out within 8 hours at constant temperature in the cryostat. Before the next series, the cryostat was switched off, and the adsorbent was heated to 20-25°C. In the case of repeated cooling of the cryostat to -36.3°C, it was found that during the 12 hours' heating, strong adsorption of ammonia vapors occurred, so that the pressure in the system was doubled. Before the following heating of the cryostat, a series of measurements was carried out up to nearly $P/P_s = 0.3$; in the case of repeated heating, the sorption rate again increased considerably. The data obtained show the importance of activated adsorption of ammonia in the presence of surface oxides. The temperature dependence of the adsorption rate indicates a high activation energy. P. A. Tesner (Ref. 5) treated the carbon black surface by a method that is based upon decomposition of benzene at 780-790°C after the reaction $C_6H_6 = 6C + 3H_2$. The carbon black surface is covered by some molecular layers of carbon, and is thus insulated against the effect of surface oxides. Figs. 2 and 3a compare the adsorption of ammonia on the surface of anthracene carbon black treated by the Tesner method, and

also not treated anthracene carbon black. German anthracene carbon black had a specific surface of 110 m^2/g; its aqueous suspension had a pH of 3.6 owing to its high surface oxide content. After treatment of the carbon black, the weighed portion was increased by 8.7%, and the specific surface, decreased to 84 m^2/g. Of particular interest is the occurrence of hysteresis on such surfaces whose amount is higher than half the amount of the monomolecular layer (Fig. 2). After the product had been subjected to thermal treatment for a long time, part of it was annealed in a reduced atmosphere at 1250°C, whereby the hysteresis was not removed and the character of the adsorption isothermal lines was not changed (Fig. 3,2). The experiments carried out with furnace black annealed at 1250°C showed (Fig. 3,6) that the desorption branch considerably exceeds the adsorption branch. The absolute adsorption isothermal lines of ammonia on original and German acetylene carbon black P-1250 annealed at 1700°C, were compared with the isothermal lines for graphitized carbon black (Ref. 8) (Fig. 4). P. A. Tesner and N. N. Lezhnev are thanked. There are 4 figures and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc.

Moscow Inst. of Chem. Machery, Chr. Gen Chem.

Card 3/3

SHIDLOVSKIY, A.A.; VOSKRESENSKIY, A.A.

Heats of formation of lithium, strontium, lead, and silver iodates and potassium metaperiodate. Zhur. fiz. khim. 39 no.6:1523-1526 Je '65. (MIRA 18:11)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
Submitted July 22, 1964.

VOSKRESENSKIY, A.A., inzh.

Filter-relay of symmetrical components. Elek. sta. 36 no.6:67-70 Je '65. (MIRA 18:7)

VOLODINA, N.A.; SHIDLOVSKIY, A.A.; VOSKRESENSKIY, A.A.

Heats of formation of alkali metal chlorates. Zhur. fiz. khim. 38 no.6:1703-1705 Je '64. (MIRA 18:3)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

SHIDLOVSKIY, A.A.; VOSKRESENSKIY, A.A.

Heats of formation of strontium, lead, and silver sulfites.
Zhur. fiz. khim. 37 no.9:2062-2063 S '63. (MIRA 16:12)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

VOSKRESENSKIY, A.A.

Attachment for working with solutions sensitive to the action of air. Zav.lab. 29 no.8:1012-1013 '63. (MIRA 16:9)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
(Chemical apparatus)

VOSKRESENSKIY, A. A.

32492. Trekhchastotnyy zagraditel' dlya vysokochastotnykh kanalov. (S primech. red.). Elektr. stantsii, 1949, No. 10, s. 54-55

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

VOSKRESENSKIY, A. A.

VOSKRESENSKIY, A. A. and KORELOV, T. I. Some Peculiarities of an Automatic Reclosing Device Equipped with EVP-285 Relay (Nekotoryye Osobennosti Skhemy APV s Rele EVP-285), p. 40

The features and operation of EVP-285 relay used for automatic reclosing of circuit breakers is briefly discussed. (Drawing and graph).

SO: ELEKTRICHESKIYE STANTSII, No. 12, Dec. 1952, Moscow (1614306)

1. VOSKRESENSKIY, A. A.: KORELOV, T. I.

2. USSR (600)

4. Electric Switchgear

7. Some peculiarities of the atuomatic reclosing scheme with the EVP-285 relay. Elek. sta., 23, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VOSKRESENSKIY, A.A., inzhener; KORELOV, T.I., inzhener.

Shortcoming in the design of a protection scheme with a VTN-561 transformer. Elek.sta. 24 no.9:55-56 S '53. (MLRA 6:8)
(Electric transformers) (Electric circuits)

VOSKRESENSKIY, A. A.

Electrical Engineering Abstracts
May 1954
Engineering.

1857. Calculation of the curves of transient processes in electric circuits containing iron. A. A. Voskresenskii. *Elektrichestvo*, 1954, No. 1, 61-6, *In Russian.*

The method shown permits an approximate calculation of the transient current in a circuit with a nonlinear inductance for sinusoidal flux. The advantage is that the transient current may be calculated from the constants of the magnetic characteristic of the circuit and the initial and final conditions of the process without considering the damping of the free flux. The analytical method is correspondingly simple and its errors are acceptable. They are due to the discrepancy between the actual magnetic characteristic and the analytical expression assumed for its representation, to possible inaccuracies in the Fourier analysis of the components of the composite current curve, the inaccuracy of the representation of the time-relation of the current and the neglect of influences of hysteresis and eddy currents. The total error of the first two approximations may reach 10-15%, that of the third 5-7%; however, in the range of strong alternating fields which usually accompany transient processes, the neglect of hysteresis causes no appreciable error. The results of the calculations agree well with experimental results. The representation of the complicated current curve by a series of periodic functions is very useful for the analysis of complicated electric circuits.

— B. F. KRAUS

VOSKRESENSKIY, A. A.

AID P - 2814

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 3/30

Author : Voskresenskiy, A. A., Eng. Gor'kiy

Title : Calculation of transient currents in a current transformer

Periodical : Elektrichestvo, 6, 12-19, Je 1955

Abstract : The author attempted to determine analytically in a current transformer the transient magnetizing current as dependent upon the characteristics of the transformer and upon the actual conditions of the electric network. The author analysed the complex curve of the magnetizing current as a harmonic series of periodic currents. On the basis of calculations, equations were obtained for the computation of the maximum value of induction and of the time corresponding to that value. These equations give also a general solution for the computation of the magnetizing current

Elektrichestvo, 6, 12-19, Je 1955 AID P - 2814

Card 2/2 Pub. 27 - 3/30

according to given characteristics of the transient process and to magnetic characteristics of the transformer. The author gives an estimation of errors of his method and gives also some numerical examples. Three diagrams, 4 Soviet references (1935-1954).

Institution : None

Submitted : Ap 28, 1954

VOSKRESENSKIY, A.A., inzhener.

Analysis of the work of intermediate saturable transformers for differential protection. Elec.sta. 26 no.1:35-41 Ja '55. (MLRA 8:3)
(Electric transformers)

VOSKRESENSKIY, A.A., inzhener.

Current transformers with steel cores of small cross section in differential protection systems for generators. Elek.sta.27 no.12:56 D '56. (MLRA 10:1)
(Electric transformers)

VOSKRESENSKIY, A.A.

AUTHOR: Voskresenskii, A.A., Engineer. 104-3-17/45

TITLE: The main relationships between the peak and effective values in magnetisation characteristics. (Osnovnye sootnosheniya velichin amplitud i deystvuyushchikh znacheniy v kharakteristikakh namagnichivaniya)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol. 28, No.3, pp. 54 - 58 (U.S.S.R.)

ABSTRACT: In carrying out measurements particular attention should be paid to marked deviation from sinusoidal wave form of current or voltage. Allowances are not always made correctly and it is, therefore, advisable to examine the premises by which the degree of distortion of wave forms may be evaluated from the saturation and possible peak and effective values of voltage and current. It is particularly important in making the measurements to use the right kind of instruments, electro-magnetic or electro-dynamic but not universal a.c. - d.c. instruments which respond to the mean value of the current. The relationships between peak and effective values are considered in some detail for the case of sinusoidal voltage wave form, mainly transformer magnetising current. Reference is made in particular to current transformers. The case of sinusoidal current form is then considered; this occurs on

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The main relationships between the peak and effective values in magnetisation characteristics. (Cont.)

the open circuit secondary winding of a current transformer or in conditions that occur on certain instrument transformers in protective circuits. An example is then given of calculation of an e.m.f. with sinusoidal current wave form. It is concluded that distortion of current or voltage wave form caused by non-linearity of magnetic characteristics can cause large errors in measurements of effective and peak values of current or voltage if the test circuit does not deliver the appropriate wave form of current or voltage that corresponds to actual conditions. The property of magnetic characteristics that they satisfy definite equations makes it possible to calculate the effective and peak values of current and voltage with sufficient accuracy for practical purposes.

It is, therefore, recommended to obtain from the manufacturers of current transformers details of the magnetic characteristics. There are 2 figures and 2 tables.

AVAILABLE: Library of Congress

Card 2/2

VOSKRESENSKIY, A. A.

PROTECTION & RELAYING

"On the Choice of Current Transformers on the Basis of the Ratio Curves" by Engineer A. A. Voskresenskiy, Elektricheskiye Stantsii, No. 5, May 1957, Pages 62 -- 63.

VOL 28

Points out a few vague items in the present "Standard Instructions on Relay Protection" concerning the choice of current transformers for relay protection, and indicates the effect of the saturation of these transformers on the operating characteristics of the system. Makes certain recommendations for future revisions of these instructions.

Card 1/1

VOSKRESENSKIY, A.A., inzh.; VVEDENSKIY, K.S., inzh.

Testing differential protective gear having saturating transformers. Elek.sta. 29 no.3:76-78 Mr '58. (MIRA 11:5)
(Electric relays) (Electric transformers)

VOSKRESENSKIY, A.A., insh

Filter and relay for a voltage of a negative sequence. Elek.sta. 29 no.9:47-48 S '58. (MIRA 11:11)
(Electric filters) (Electric relays)

VOSKRESENSKIY, A.A.

Adsorption of ammonia vapor on carbon black. Koll. zhur. 23 no.1:3-7 Ja-F '61. (MIRA 17:2)

1. Moskovskiy institut khimicheskogo mashinostroyeniya, kafedra obshchey khimii.

VOSKRESENSKIY, A.A., inzh. (Gor'kiy)

Calculation of e.m.f. amplitudes in current transformers with saturation of the steel core. Elektrichestvo no.2:82-84 F '64. (MIRA 17:3)

VOSKRESENSKIY, A.A., inzh.

"Current transformers in relay protection networks" by B.E.Kazanskii. Reviewed by A.A.Voskresenskii. Elek. sta. 32 no.2:95-96 F '61. (MIRA 16:7)

(Electric transformers) (Electric protection) (Kazanskii, B.E.)

VOSKRESENSKIY, A.A., inzh.; CHERVONNYY, Ye.M., inzh.

Features of designing electric protection systems using operative a.c. Elek. sta. 32 no.12:53-55 D '61. (MIRA 15:1)
(Electric protection)

VOSKRESENSKIY, A.D., kapitan meditsinskoy sluzhby; PROKHOROV, A.I., inzh., kapitan-leytenant

Use of electronic calculating machines in medicine. Voen.-med.zhur. no.6:81-88 Je '59. (MIRA 12:9)
(MEDICINE, MILITARY AND NAVAL
electronic calculating machines, uses (Rus))

VOSKRESENSKIY, A.D.; PROKHOROV, A.I. (Moskva)

Use of the computing apparatus in medicine. Sov.zdrav. 18 no.8:19-25 '59. (MIRA 12:12)
(CYBERNETICS)

VOSKRESENSKIY, A.D. (Moskva); PROKHOROV, A.I.

Utilization of elctronic computing machines in medical statistics.
Sov.zdrav. 19 no.2:25-33 '60. (MIRA 13:5)
(ELECTRONIC CALCULATING MACHINES)
(STATISTICS, MEDICAL)

27.1230

39908
S/044/62/000/007/087/100
C111/C333

AUTHORS: Voskresenskiy, A. D., Prokhorov, A. I.

TITLE: Cybernetic problems in medicine

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 74, abstract 7V353. ("Kibernetiku-na sluzhbu kommunizmu. I. I." M.-L. Gosenergoizdat, 1961, 126-140)

TEXT: According to the authors, the purpose of a cybernetic approach to the examination of the control processes of the life functions of an organism consists of the following: 1) the determination of the structure of the control system; 2) the determination of the dynamic characteristics of the control system; 3) the determination of the individual variants of the function control dynamics; 4) the determination of possible deviations in the function control system. The authors shortly describe how the problems given above are dealt with by means of cybernetics and, especially, by means of the theory of automatic control, both mathematically and technically. The authors then shortly describe the possibilities and problems of the automatic compilation of the information, as well as the problematic and hopes of applying electronic computers to the work-up of diagnostic information. The last chapters of the paper are devoted to the problems of an automatic control of physiological systems and to the role of the electronic computer in medical statistics and in the organization of medical care.

[Abstracter's note: Complete translation.]

VASIL'YEV, P. V., VOSKRESENSKIY, A. D. and GAZENKO, O. G.

"Some Problems of Experimental Space Physiology"

report presented at the 13th Intl. Astronautical Federation Congress (IAF)
Varna, Bulgaria, 23-29 Sep 1962

B/0000/63/000/000/0112/0115

ACCESSION NR: AT4042665

AUTHOR: Voskresenskiy, A. D.

TITLE: Effect of prolonged transverse accelerations on cardiac activity

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 112-115

TOPIC TAGS: transverse acceleration, cardiac activity, narcotized dog, myocardial hypoxia

ABSTRACT: Experiments were conducted on narcotized dogs to determine the effect of prolonged transverse accelerations on cardiac activity. The dogs were exposed to accelerations of 3 g and 6 g for 1 and 4 min, and to an acceleration of 9 g for 1 min. The dogs were subjected both to vertical (back-to-chest) accelerations and to tilt-table (45°) accelerations with equal back-to-chest and pelvis-to-head components. Oxygen blood levels were determined from samples taken from arteries and coronary sinus before and during acceleration. Outflow per minute of blood from the coronary sinus was measured, and EKG's were taken with standard leads. Respiratory ventilation was maintained at normal levels with a respirator.

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ACCESSION NR: AT4042665

Regular decrease of the O_2 blood level in the coronary sinus and simultaneous increased outflow from the sinus indicate that the oxygen requirement of the heart increases during exposure to transverse acceleration. Maintenance of a sufficient level of cardiac circulation is apparently a basic factor in compensating the increased oxygen requirement of the myocardium. Under conditions of reduced flow of blood from the sinus, cardiac disturbances occurred even when no decrease in arterial O_2 level took place during acceleration. On the other hand, severe impairment of oxygenation by 4 min of 6-g acceleration was never accompanied by arrhythmias or slowed pulse so long as sinus outflow remained at the increased level. Increased sinus outflow cannot be taken as an absolute indicator of cardiac blood supply sufficiency. In some cases, especially when the arterial O_2 level drops and arteriovenous differentiation is weak, the effect of circulation may reach a limit beyond which it cannot prevent the development of myocardial hypoxia. Interference with oxygenation of the blood increases the strain on compensatory mechanisms, as shown by the existence of a correlation between the arterial O_2 level and the quantity of O_2 absorbed from the blood by the myocardium. Tilt-table trials (at 45°) showed the hemodynamic shifts caused by a head-to-pelvis acceleration component significantly reduce the efficiency of myocardial blood supply.

Card 2/3

ACCESSION NR: AT4042665

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 3/3

S/216/63/000/001/002/004
A066/A126

AUTHORS: Vasil'yev, P.V., Voskresenskiy, A.D., Gazenko, O.G.

TITLE: Experimental studies in space physiology

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya, 28- no. 1, 1963, 15 - 23

TEXT: The accumulation of data relating to the physiological effects of space traveling upon the human organism makes it necessary to consider the two alternatives of experimental research: 1) the study of individual functions (heart activity, respiration, etc.) under the influence of certain factors of actual space flight; 2) the study of the physiological effects of certain factors of space flight. The second alternative involves comprehensive animal experiments which, though only indicative of the relevant reactions of the human organism, make it possible to work out diagnostic criteria and training programs. The necessity of experimental research into the physiological mechanisms is illustrated by the effects of transverse acceleration. Data relative to pulmonary circulation, oxygen consumption by the cardiac muscle, oxygen tension in the

Card 1/2

Experimental studies in space physiology

cerebral tissues, and the functions of the central nervous system, as well as literature data were used to set up a diagram illustrating the principal physiological effects of transverse acceleration which are as follows: 1) Changes in pulmonary ventilation and in the redistribution of blood in the lungs disturb the oxygenation of blood in the lungs; 2) redistribution of blood in the vascular system of the cerebrum, accompanied by a higher intensity of the afferent impulses, disturbs nutrition and the regulatory activity of the brain; 3) general changes of the hemodynamic conditions deteriorate the supply of O_2 to the heart. These pathological symptoms were observed exclusively in transverse accelerations lasting longer than 1 min. It appears possible to describe physiological changes quantitatively and to set up a model reproducing physiological changes in the human organism under various conditions of space traveling. Such a model will permit an estimate and prognosis of the astronaut's state of health. In addition, better training programs may thus be worked out, and also the action of pharmacological and other agents can be examined under conditions of space flight.

SUBMITTED: August 24, 1962

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L 11241-63 EWT(1)/EDS/ES(a)/ES(1)/ES(c)/ES(k) AMD/AFFTC/AFMDC Pb-4
ACCESSION NR: AF3004435 S/0020/63/151/004/0978/0981 A/h

66

AUTHORS: Voskresenskiyf, A. D.; Kisol'yev, A. A.; Bryuzgina, M. I.

TITLE: Cardiac circulation and myocardial oxygen consumption during lateral acceleration.

SOURCE: AN SSSR. Doklady," v. 151, no. 4, 1963, 978-981

TOPIC TAGS: acceleration, cardiac circulation, myocardial oxygen consumption.

ABSTRACT: Cardiac circulation and myocardial oxygen consumption were studied in 2 series of dogs subjected to a lateral acceleration (spine-thorax) of 6 g for 1 min and 4 min. A DP-2 apparatus was used to ensure that the heart was supplied with sufficient oxygen. After 1 min acceleration at 6 g the percentage of oxygen in blood from the arteries and coronary sinus and the arteriovenous difference were only slightly different from the initial values. In the majority of cases the rate at which blood was discharged from the coronary sinus was higher. Under these conditions the authors consider that the body's compensatory mechanisms are adequate. After 4 min acceleration the percentage oxygen in arterial blood decreased considerably. There was also a reduction in the percentage oxygen in blood from the coronary sinus. However, this reduction was not large enough to maintain the initial value for arteriovenous differences. In all cases there was

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L 17547-63
ACCESSION NR: AP3004435

an increase in the rate at which blood was discharged from the coronary sinus. After [illegible] all of these values tended to return to the [illegible] changes in the ECG were not very specific under these conditions. [illegible] arrhythmia and extra-systoles were noted together with a decrease in the pulse rate and a drop in arterial pressure. The authors consider that myocardial hypoxia might develop under these conditions. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 11Feb63 DATE ACQ: 21Aug63 ENCL: 00

SUB CODE: AM NO REF SOV: 007 OTHER: 012

Card 2/2

ACCESSION NR: AT4037707 S/2865/64/003/000/0379/0388

AUTHOR: Vayevskiy, R. M.; Bogdanov, V. V.; Voskresenskiy, A. D.; Yegorov, A. D.; Chekhonadskiy, N. A.

TITLE: The application of mathematical methods in space medicine

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy* kosmicheskoy biologii, v. 3, 1964, 379-388

TOPIC TAGS: space medicine, mathematics, cybernetics, space flight, pulse rate, acceleration, cosmonaut, manned space flight

ABSTRACT: This article deals with the interpretation of results and concepts presented in six articles which were published in 1962-1963. These articles were written chiefly by the author of the article reviewed here. It is stressed that in the last few years new trends have appeared in biology and medicine where mathematical methods are extensively used. These trends appear to be of great importance in space biology and space medicine because of special conditions affecting biological experiments and medical protection of organisms during space

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ACCESSION NR: AT4037707

flights. An important problem of space biology and medicine is that of obtaining scientific information during space flights and transmitting the information to earth by means of radiotelemetering systems. The determination of optimal methods for coding such information which will ensure the most effective utilization of channels is the most important factor in designing radiotelemetering systems in space ships. For the solution of such problems the mathematical apparatus of the information theory is proposed. As an example, certain problems in coding electrocardiograms are presented. The problem of coding of information includes the problem of designing simple and economical coding devices such as digital computers, integrators, and others. Functions to be performed by computers in spaceships and the principles of their design are analyzed. It is noted that development of algorithms for computers in spaceships is a very complicated problem whose solution will require the use of mathematical logic, probability theory, and other mathematical disciplines in addition to biological and medical information. As an example, an algorithm for processing electrocardiograms is presented. The methods of mathematical simulation must be applied to the construction of schemes for analyzing and prognosing changes in the state of an astronaut. Mathematical models reflecting the dynamics of physiological indices (pulse rate, blood pressure, etc.) due to the action of certain factors during space flight can be

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ACCESSION NR: AT4037707

developed on the basis of experimental data obtained in laboratories by using the methods of mathematical statistics. Statistical indices such as mathematical expectation, variance, and correlation function must be established. Pecularities encountered in determining statistical indices for space biology and space medicine are analyzed. As an example, the problem of prognosing the pulse rate when a cosmonaut is subjected to linear accelerations is presented. It is concluded that quantitative descriptions of physiological processes and the construction of mathematical models reflecting the principal changes in organisms under various space flight conditions are possible. The authors believe that the problems analyzed in the article represent only a small part of the questions in space biology and space medicine which will require mathematical methods for their solution.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MA, PH

NO REF SOV: 006 OTHER: 000

Card 3/3

ACC NR: AP6033399 SOURCE CODE: UR/0293/66/004/005/0755/0767

AUTHOR: Volynkin, Yu. M.; Akulinichev, I. T.; Vasil'yev, P. V.; Voskresenskiy, A. D.; Kas'yan, I. I.; Maksimov, D. G.

ORG: none

TITLE: Some data on the condition of cosmonauts during the flight of the Voskhod-1 spacecraft

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 5, 1966, 755-767

TOPIC TAGS: manned spacecraft, space physiology, space medicine, human physiology, cardiovascular system, nervous system, vestibular analyzer/Voskhod 1 spacecraft

ABSTRACT: A diagram of the biomedical monitoring parameters and some results of a further statistical analysis of the Voskhod-1 flight are presented in the following figures and tables. As in other discussions of this flight, the general conclusion was that none of the observed physiological shifts were of a pathological nature, and therefore, were reversible. The most significant finding of the flight was a confirmation of the possible specific effect of weightlessness on the statokinetic

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ACC NR: AP6033399

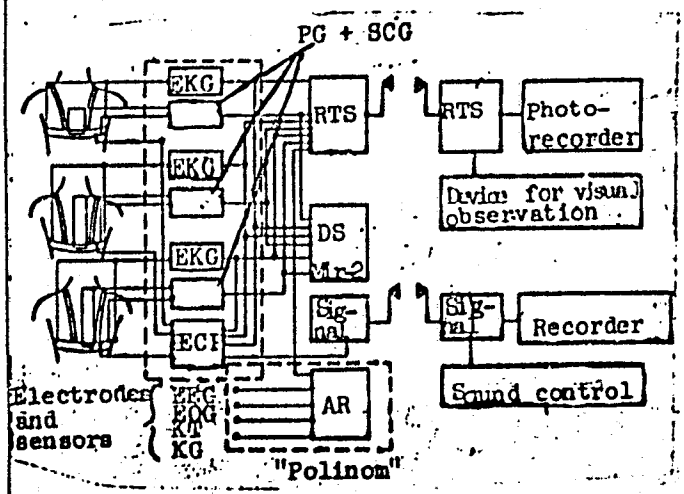

Fig. 1. Block diagram of physiological parameters recorded during the flight of Voskhod-1

EKG - Electrocardiogram; PG, SCG - pneumogram plus seismocardiogram; EEG - electroencephalogram; PECP - pulmoelectrocardiophone; EOG - electrooculogram; KT - coordination test; KG - kinetogram; RTS - radiotelemetry system; DS-Mir-2 - data storage unit; AR - amplifier-readout.

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ACC NR: AP6033399

Cosmonauts	Physiological index	Before flight						After flight	
		6.X 1964	8.X 1964	11.X 1964	4 hr prelaunch 12.X 1964	5 min prelaunch 12.X 1964	1 min prelaunch 12.X 1964	1st day	15 th day
V. M. Komarov	Pulse	76	68	72	87	89	89	80	68
	Respiration	8	12	10	18	23	20	11	10
	Arterial pressure	115/75	115/70	120/75	—	—	—	115/80	115/75
K. A. Feoktistov	Pulse	80	84	80	78	86	97	84	72
	Respiration	12	16	18	21	20	21	16	11
	Arterial pressure	110/75	105/75	125/85	—	—	—	105/85	115/80
B. B. Yegorov	Pulse	72	64	64	81	86	95	84	68
	Respiration	14	14	14	18	25	21	10	15
	Arterial pressure	100/70	105/65	120/70	—	—	—	120/80	110/65

Table 1. Dynamics of the pulse rate, respiration rate, and arterial pressure of the Voskhod-1 cosmonauts before, during, and after the flight (from the data of M. D. Nikitin et al).

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ACC NR: AP6033399

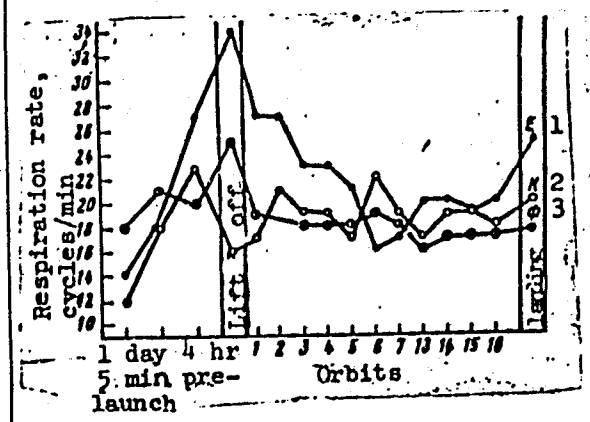

Fig. 2. Dynamics of the average respiratory rates of V. M. Komarov (2), K. P. Feoktistov (3), and B. B. Yegorov (1) before, during, and after the Voskhod-1 flight

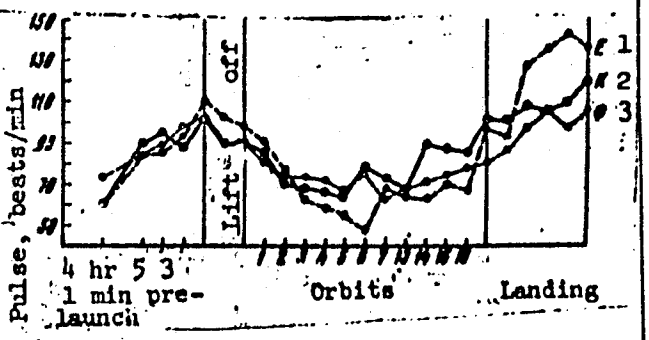

Fig. 3. Dynamics of the average pulse rates of B. B. Yegorov (1), V. M. Komarov (2), and K. P. Feoktistov (3), before, during, and after the Voskhod-1 flight

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ACC NR: AP6033399

Parameters	Cosmonauts	2.5 hr before launch	Orbits 1	2	3	4	5	6	7	13	14	15	16
P-Q, sec	V. M. Komarov	0,12	0,10	0,11	0,10	0,12	0,11	0,11	0,11	0,10	0,10	0,10	0,10
	K. P. Feoktistov	0,16	0,14	—	0,13	0,16	0,13	0,16	0,14	0,11	0,12	0,12	0,12
	B. B. Yegorov	0,12	0,12	0,12	0,13	0,13	0,14	0,14	0,16	0,10	0,12	—	0,10
Q-T, sec	V. M. Komarov	0,34	0,34	0,37	0,36	0,37	0,38	0,35	0,38	0,39	0,36	0,34	0,34
	K. P. Feoktistov	0,36	0,36	—	0,36	0,37	0,37	0,37	0,42	0,38	0,39	0,37	0,36
	B. B. Yegorov	0,33	0,34	0,37	0,38	0,39	0,41	0,44	0,39	0,40	0,38	—	0,37
R-R, sec	V. M. Komarov	0,69	0,61	0,78	0,70	0,86	0,99	0,61	0,76	0,89	0,71	0,72	0,75
	K. P. Feoktistov	0,76	0,69	—	0,82	0,88	0,91	0,90	0,96	0,87	0,82	0,80	0,78
	B. B. Yegorov	0,67	0,69	0,73	0,88	0,98	1,13	1,24	0,98	1,03	0,87	—	0,90
Systolic index	V. M. Komarov	49,9	57,7	48,7	51,7	43,7	40,0	58,2	50,7	45,0	51,1	47,2	45,3
	K. P. Feoktistov	47,6	52,9	—	44,6	42,4	40,0	41,3	43,3	44,2	47,9	46,5	46,8
	B. B. Yegorov	49,2	58,6	50,7	43,4	39,7	36,2	36,8	40,1	39,2	44,8	—	41,0

Table 2. Some indices of the cardiac activity of V. M. Komarov (1), K. P. Feoktistov (2), and B. B. Yegorov (3) before and during the flight of Voskhod-1

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Orbits	V. M. Komarov			K. P. Feoktistov			B. B. Yegorov		
	M, sec	σ, sec	C, %	M, sec	σ, sec	C, %	M, sec	σ, sec	C, %
5 min before	0,68	0,07	10,5	0,72	0,076	10,56	0,70	0,073	10,50
1	0,72	0,08	12,8	0,75	0,031	4,15	0,69	0,074	10,74
3	0,87	0,098	11,26	0,84	0,084	9,96	0,94	0,109	11,65
6	0,82	0,075	9,14	0,86	0,074	7,66	1,31	0,044	3,36
13	0,87	0,038	4,34	0,93	0,091	9,80	1,02	0,067	6,58
16	0,74	0,043	5,82	0,81	0,053	6,50	0,96	0,082	8,60

Table 3. Results of a statistical analysis of R-R intervals for V. M. Komarov (1), K. P. Feoktistov (2), and B. B. Yegorov (3) before and during the Voskhod-1 flight

analyzer and its interaction with other analyzers leading to the possible development of prolonged spatial disorientation illusions and prolonged vestibuloautonomic reactions which decrease the work capacity of cosmonauts. Orig. art. has: 4 figures and 4 tables.

SUB CODE: 06/ SUBM DATE: 26May66/ ORIG REF: 010/ OTH REF: 001/ ATD PRESS: 5100

L 14246-66 RD

39

ACC NR: AT6003857 SOURCE CODE: UR/2865/65/004/000/0227/0236

AUTHOR: Voskresenskiy, A. D.; Gazenko, O. G.; Iznosimov, G. V.; Kopanev, V. I.; Maksimov, D. G.; Yazdovskiy, V. I.

ORG: none

TITLE: Some physiological data for evaluating the condition and work capacity of cosmonauts under conditions of orbital flight

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 227-236

TOPIC TAGS: manned spaceflight, EEG, skin, cosmonaut, space psychology, brain, biosensor, bodily fatigue, vision

ABSTRACT: This paper presents some graphic results of biomedical data from the Vostok-5 (V. F. Bykovskiy) and Vostok-6 (V. V. Tereshkova) flights. These include records of EEG's, EOG's, and skin galvanometry.

In summing up these data, the authors observed that a distinguishing feature of brain bioelectricity during the first hours and days of the flight was the increase in the index of high-frequency oscillations. No increase in the index of low-frequency oscillations was observed. Also characteristic of the initial flight period were elevated oculomotor activity and a rise in the

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number of rapid variations in cutaneous electrical resistance per unit of time. These reactions probably reflected the emotional state associated with initial flight stages. Such factors as radio communications with ground control points and between spacecraft, the reception of commands and signals, and observation of the surface of the Earth and other heavenly bodies act as powerful stimuli eliciting a high level of psychoemotional reactions.

The process of adaptation to flight conditions was reflected in EOG and skin galvanometric indices, in that oculomotor activity and the mean number of rapid variations in the skin galvanic reaction showed significant decreases.

It is felt that the EEG, EOG, and skin galvanometric data from Vostok-5 and -6 reflected the psychoemotional adaptation of Bykovskiy and Tereshkova to prolonged spaceflight. EEG changes and a sharp decrease in oculomotor activity can act as prognostic indices of progressive fatigue. EOG data can be used to judge the effect of weightlessness on the function of the vestibular analyzer. However, it is noted that changes in all of the indices during the spaceflight did not correspond to subjective feelings of fatigue, vestibular symptoms, or a noticeable decrease in working ability. Orig. art. has: 3 figures. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 012 / OTH REF: 003

VASIL'YEV, P.V.; VOSKRESENSKIY, A.D.; KAS'YAN, I.I.; MAKSIMOV, D.G.; CHEKHONADSKIY, N.A.; PESTOV, I.D.

Reactions of cardiovascular and respiratory systems of astronauts in orbital flight on the spaceship "Voskhod-1." Izv. AN SSSR. Ser. biol. no.4:491-499 Jl-Ag '65. (MIRA 18:7)

L 9890-66 FSS-2/ENT(l)/FS(v)-3/EEC(k)-2/EWA(d) TT/DD/GW
ACC NR: AP6000309 SOURCE CODE: UR/0293/65/003/006/0927/0934

AUTHOR: Voskresenskiy, A. D.; Venttsel', M. D. 58 B

ORG: none

TITLE: The use of correlation analysis methods for studying the human cardiovascular reaction to the space flight of Voskhod-1 12

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 927-934

TOPIC TAGS: human physiology, manned space flight, cardiovascular system, correlation analysis, Voskhod 1, ~~Komarov~~, ~~Feoktistov~~, ~~Yegorov~~

ABSTRACT: The authors selected EKG samples from the Voskhod-1 crew representing 100—300 cardiac cycles, from which the functions of autocorrelation and intercorrelation were computed for the R-R and Q-T intervals. During the prelaunch period, slow wave-like variations in these intervals were noted for the entire crew; the fluctuation period consisted of 56—64 cardiac cycles. The R-R and Q-T intercorrelation function had a cosinusoidal form. In the 14th orbit, when Komarov's pulse was equivalent to his prelaunch reading, the R-R fluctuation period was 12—16 cardiac cycles. At this time, the Q-T interval did not vary, which supports the opinion that cardiac working efficiency is maintained during weightlessness. Slow R-R fluctuations were not observed for any crew member during rest or sleep. It was concluded

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ACC NR: AP6000309 O

that emotional factors effecting circulatory regulation were responsible for R-R and Q-T fluctuations. Orig. art. has: 3 figures. [CD]

SUB CODE: 06 SUBM DATE: 05Jun65/ ORIG REF: 010/ OTH REF: 006/ ATD PRESS 4165

Card 2/2

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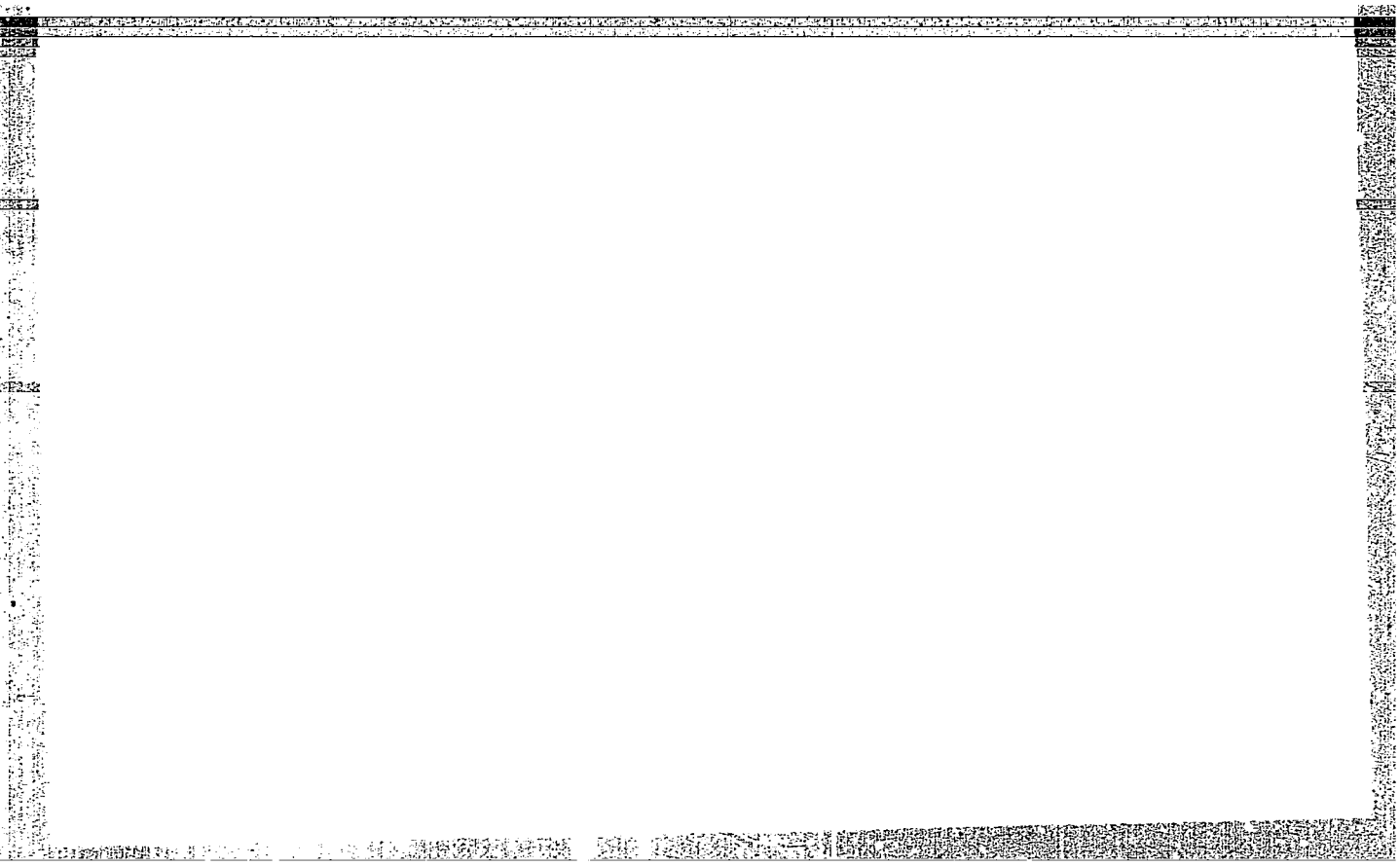

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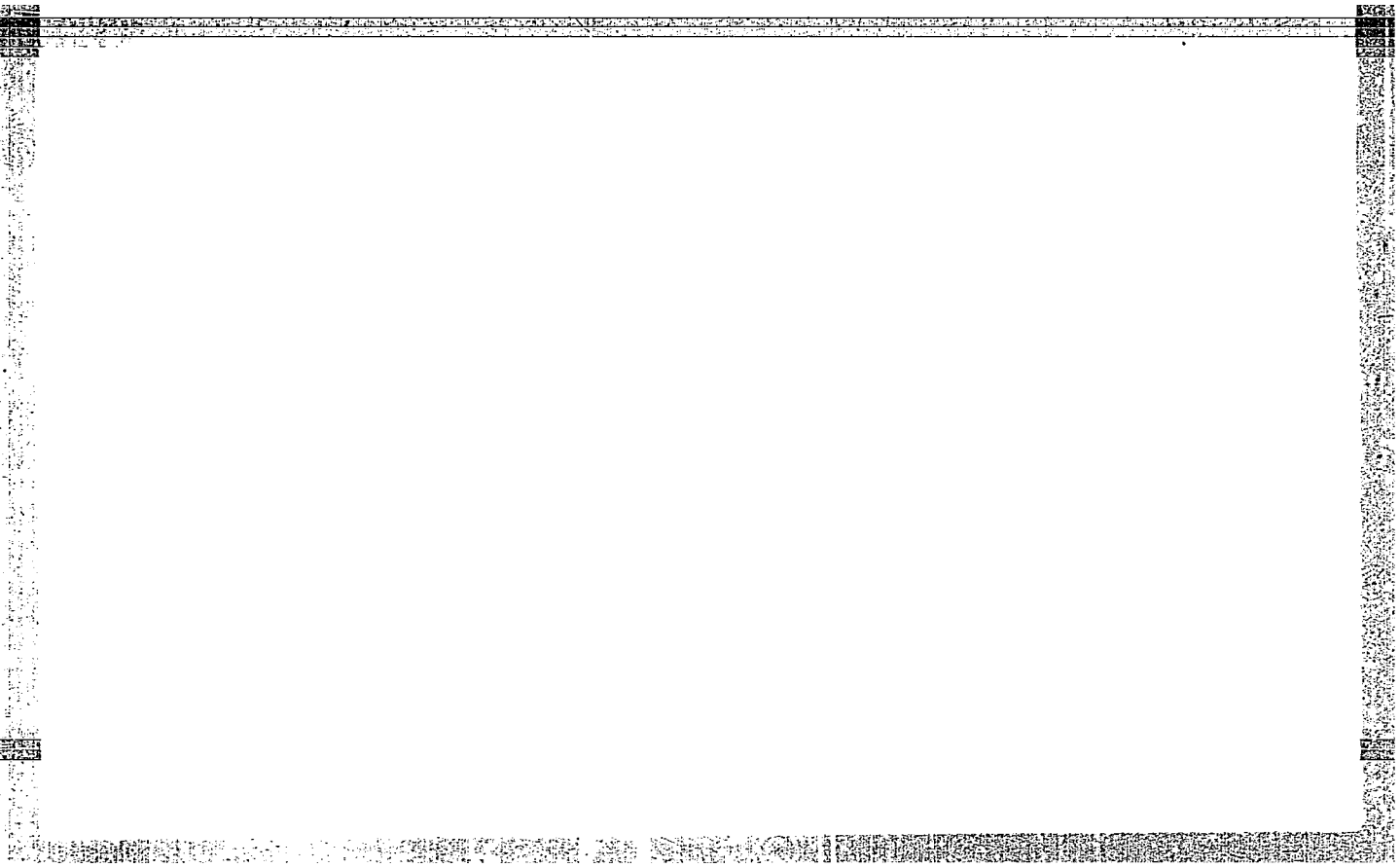

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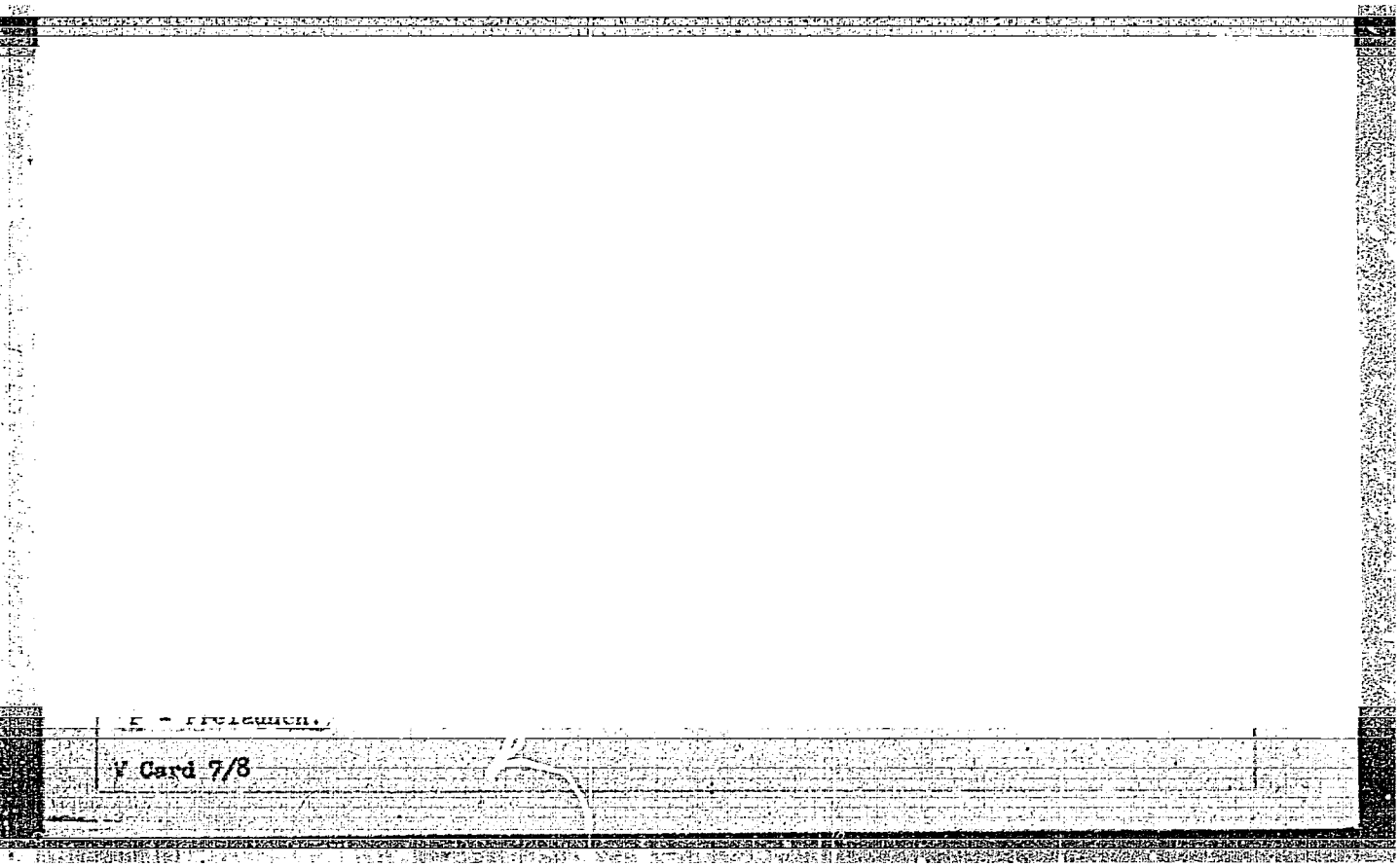

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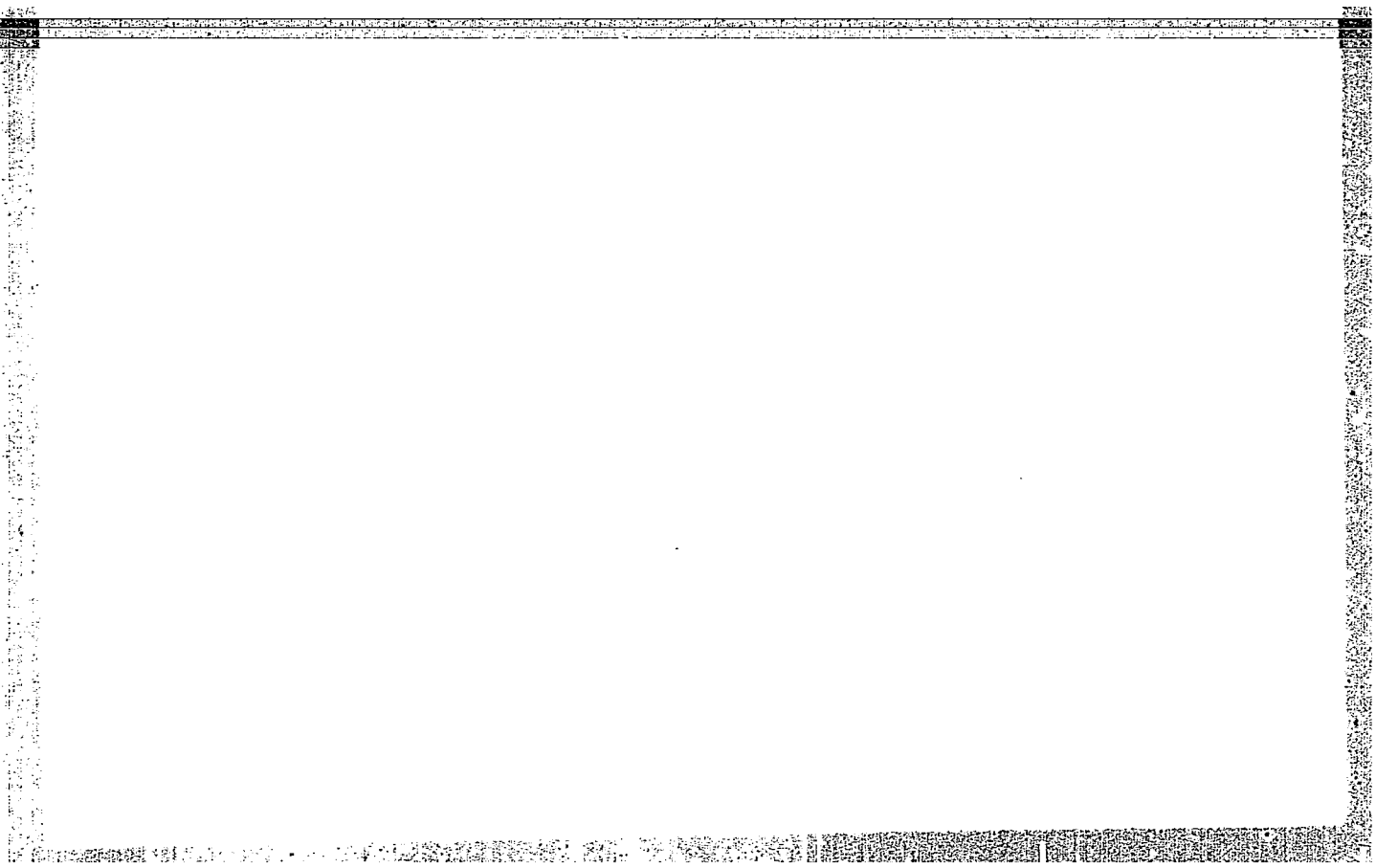

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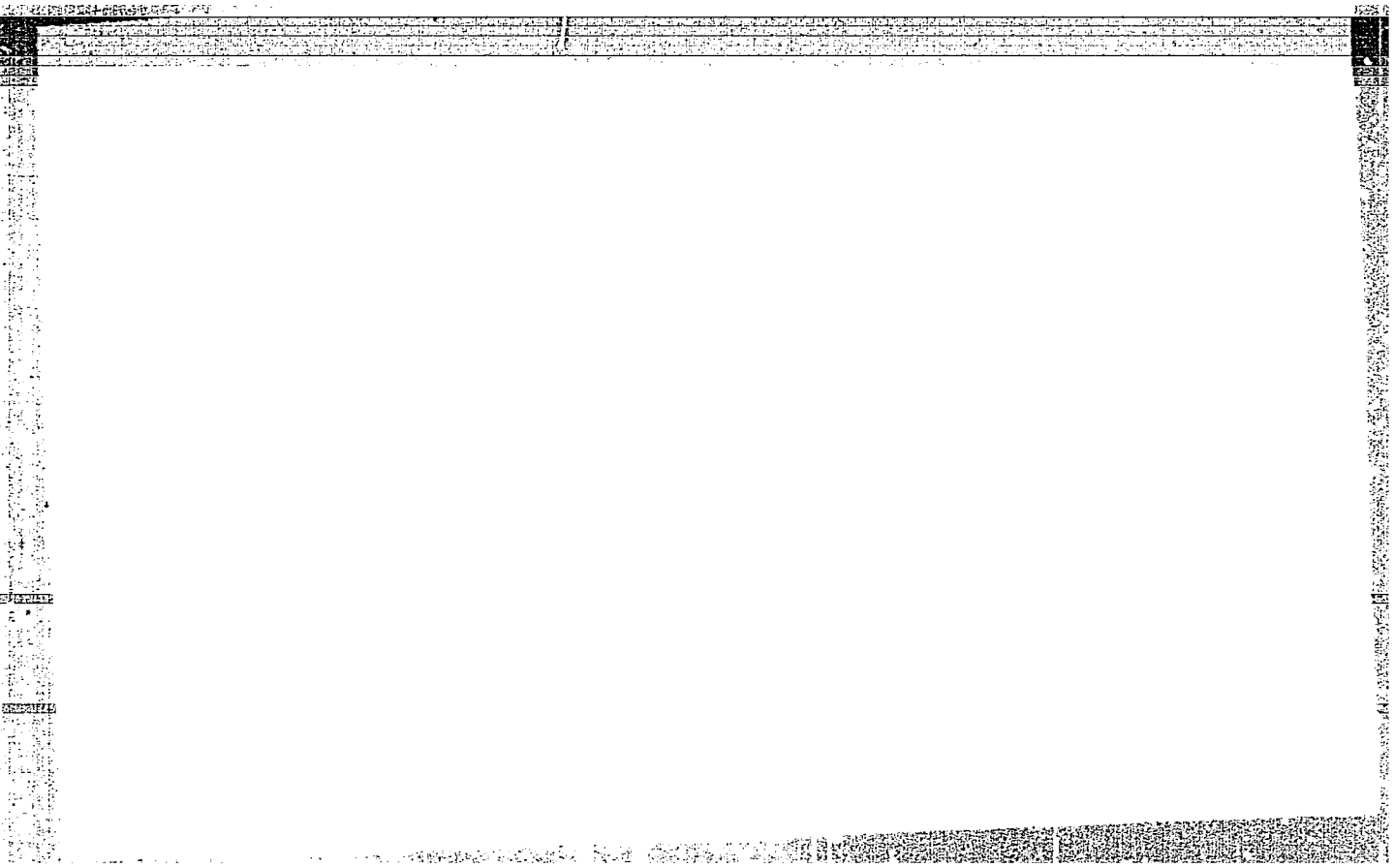

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